

**Comparative Interpretation of 1921 Boundaries
To Present Boundaries and Land Productivity**
Work Sheet

1. How many counties were present in the New Mexico Territory in 1852?
2. What was the disputed area between Mexico and the United States in the lower left corner of the map and what is the area history?
3. Determine the area of the New Mexico Territory in 1852 (in cm^2). Be sure to exclude the Gadsden Purchase.
4. If 2cm equal 45.54 miles (note the distance measurement at the bottom of the map), how many square miles were in the New Mexico Territory in 1852?
5. After the Gadsden Purchase, the total state area was 121,666 square miles. What was the size of the Gadsden Purchase in acres?
6. How many acres were in the New Mexico Territory in 1852?
7. How many hectares (ha) were in the New Mexico Territory in 1852?
8. Determine the area (in cm^2) of both Socorro and Dona Ana Counties in 1852.
9. If 2cm equal 45.54 miles, how many square miles were in Socorro and Dona Ana counties in 1852?
10. If there are 640 acres in a square mile, how many acres were in Socorro and Dona Ana counties in 1852?
11. How many hectares (ha) were there in Socorro and Dona Ana counties in 1852?
12. In 1852, what percentage of the New Mexico Territory area was located in Socorro and Dona Ana Counties?

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Work Sheet Key

1. How many counties were present in the New Mexico Territory in 1852? **9**
2. What was the disputed area between Mexico and the United States in the lower left corner of the map and what is the area history? **The Gadsden Purchase settled the boundary dispute resulting from the Treaty of Guadalupe Hidalgo and the inaccuracies of the Disturnell Treaty, and set a new territorial limit for the United States. The Gadsden Purchase occurred approximately ten years before the Civil War. Congressional members from southern states favored the purchase, desiring to acquire territory suitable for the southern route of a transcontinental railroad. The purchase was negotiated by James Gadsden, a railroad executive from South Carolina, with General Santa Anna, and was signed in Mexico City on December 30, 1853. The Gadsden Purchase also included all of southern Arizona below the Gila River.**

Because northern congressional members perceived this purchase as a southern plan, the treaty was not ratified until April 25, 1854, and there were delays in paying the \$10 million to General Santa Anna. All the problems ended in November 1858, when United States troops entered Mesilla (near current day Las Cruces). In 1862, just prior to the Civil War Congress approved a proposal for the Pacific Railroad. Ultimately, the Southern Pacific Railroad passed through the Gadsden Purchase.

3. Determine the area of the New Mexico Territory in 1852 (in cm^2). Be sure to exclude the Gadsden Purchase. **The north and south boundaries are approximately 14.5 and 15.5cm, respectively, and average 15.0cm. The east and west boundaries average 15.25cm. The area of a rectangle is equal to the height times the width, or $15.00 \times 15.25 = 228.75 \text{ cm}^2$.**
4. If 2cm equal 45.54 miles, note the distance measurement at the bottom of the map, how many square miles were in the New Mexico Territory in 1852? **Divide the 15.25cm from the previous answer by 2; this equals 7.625. Now multiply 7.625 times 45.54 miles; this equals 347.2 miles from north to south. Divide 15.00 by 2; this equals 7.50. Now multiply 7.50 times 45.54; this equals 341.5 miles from east to west. Now multiply 347.2 times 341.5; this equals 118,568.8 square miles.**
5. After the Gadsden Purchase the total state area was 121,666 square miles. What was the size of the Gadsden Purchase in acres? **Subtract 118,568.8 from**

- 121,666; the answer is 3,097.2 square miles. There are 640 acres in a square mile; so multiply miles times acres; the answer is 1,982,208 acres.**
6. How many acres were in the New Mexico Territory in 1852? **Multiply 118,568.8 times 640; the answer is 75,884,032 acres.**
 7. How many hectares (ha) were in the New Mexico Territory in 1852? **There are 2.47 acres in a hectare (ha); so divide 75,884,032 by 2.47; this equals 30,722,280 ha.**
 8. Determine the area (in cm^2) of both Socorro and Dona Ana counties in 1852? **The north and south boundaries are average 15.5cm in length. While east to west boundaries are approximately 8 and 7.5cm, and average 7.75cm in length. The area of the rectangle is equal to the height times the width, or 15.5 times 7.75=120.125 cm^2 .**
 9. If 2cm equal 45.54 miles, how many square miles were in Socorro and Dona Ana counties in 1852? **Divide 15.5 by 2; this equals 7.75. Now multiply 7.75 times 45.54; this equals 353 miles from north to south. Divide 7.75 by 2; this equals 3.875. Now multiply 3.875 times 45.54; this equals 176.5 miles from east to west. Now multiply 353 miles times 176.5 miles; this equals 62,304.5 square miles.**
 10. If there are 640 acres in a square mile, how many acres were in Socorro and Dona Ana counties in 1852? **Multiply 62,304.5 square miles times 640; this equals 39,874,880 acres.**
 11. How many hectares (ha) were there in Socorro and Dona Ana counties in 1852? **There are 2.47 acres in a ha. Therefore, divide 39,874,880 by 2.47; this equals 16,143,676ha.**
 12. In 1852, what percentage of the New Mexico Territory area was located in Socorro and Dona Ana counties? **The total state area in 1852 was 30,722,280 ha, and the total area in Socorro and Dona Ana Counties was 16,143,676 ha; divide the total area of the two counties by the total state area. This equals 0.5; in 1852, 50% of the area in the Territory of New Mexico was located in Socorro and Dona Ana Counties.**